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RIBES OF OREGON

BY

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RIBES OF OREGON

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The keys and descriptions of Ribes and Rusts on Ribes given here are intended for the use of blister rust scouts, forest rangers, and others doing blister rust work in the State of Oregon.

Both currants and gooseberries are generally referred to as Ribes though technically the two constitute the separate genera, Ribes and Grossularia. To those who are not familiar with the group other plants might be classed with them. To avoid this it is only necessary to compare the plant in question with the following points, common to all currants and gooseberries of Oregon.

1st - All have woody stems.

2nd - All have simple leaves; i.e., a simple leaf has but one blade which may be deeply lobed or toothed but not divided into separate smaller blades.

3rd - The sepals or outer whorl of leaves of the flower are the conspicuous part of the flower.

4th - The sepals are united at their bases to form a tube called the hypanthium which may be very short or vary to $\frac{1}{2}$ an inch or more in length.

5th - The hypanthium or tube of the flower is borne on top of the ovary or fruit and not at its base. It and the sepals dry in place and do not fall off from the berry.

6th - The petals are smaller than the sepals and are borne in the mouth of the tube.

7th - There are five sepals, 5 petals, and 5 stamens.

8th - The style borne in the exact center of the flower is either single or divided more or less completely into two.

9th - The fruit is a true berry with the hypanthium drying on its top. It is never divided into rounded lobes or segments like the raspberry.

The currants and gooseberries can be separated by observing that:

1st - A true gooseberry, *Grossularia*, always has spines at the nodes on at least some of the stems or branches. These may be small and weak but they are never totally absent. Three Oregon species are often nearly spineless. The berry in breaking off always has a very evident stem left attached to it. Not all spiny members of this group are gooseberries for two currants are also spiny.

2nd - Most of the currants have no spines or prickles. In the two species which have spines the berries break from their stems in such a manner that no stem or practically none is left attached to the berry. This is true of the other currants also. The flowers of the two spiny species are very short and the sepals are distinct nearly to the ovary. This is true of some other currants but not of the gooseberries. Also the currant flowers are symmetrically arranged about a common axis which is not true of the gooseberries.

Where a descriptive word is confusing refer to the glossary. The word may have a special meaning in the key. It has been impossible to avoid the use of a few technical terms.

Do not rely too strongly on a single point in the key. All plants vary and it is impossible to make perfect keys to fit them. Two keys are given here. In the first the parts

of the flower are omitted as far as possible while in the second they are considered. If you are not sure of your determination check it by using the second key. Finally the plant should be compared with the points given in the descriptions. Either the Seattle or Corvallis office will be glad to receive specimens of your *Ribes* and *Grossularia* and check up your determinations for you.

A "specimen" of this group should be composed of a young shoot, some older wood, leaves, flowers and fruits. It should bear a label telling when, where and by whom it was collected and should be well pressed with the leaves flattened out. Specimens may be sent to the office fresh if provision is made to keep them from drying out. It is not always possible to obtain both flowers and fruits but a determination can usually be made from one or the other.

The following keys are dichotomous, i.e. they always branch into two parts. In using either key start at the beginning. You will find here two parts under the first section. Your plant must fit one or the other. In either case you will find directions to pass to some other section. For example if you are using the first key and your plant has spines it will go under the second part of the section numbered 1. This says pass to Section 13. You pass to Section 13 ignoring everything in the key up to that point. Now if your plant has stout spines and berries which break off in such fashion that stems are left attached, you again pass to the second part of the section where you are directed to pass to Section 20. Ignore everything up to Section 20. If your plant has

sticky leaves and fruits and otherwise answers to the first part of Section 20 it must be *Grossularia lobbii*. You can confirm this by turning to the description and checking with it.

KEY TO RIBES IN OREGON

1. Bushes without spines on the stems or branches. Pass to Section 2.
Bushes with spines on the stems or branches. Pass to Section 13.
2. Leaves with numerous yellow or reddish-brown resin-dots on the lower surface. Pass to Section 3.
Leaves without resin-dots but often with gland tipped hairs called stalked glands. Pass to Section 5.
3. Ovaries and fruits with resin-dots. (Resin-dots are not stalked.) Pass to Section 4.
Ovaries and fruits without resin-dots, but with stalked glands. At altitudes of 3,000 to 6,000 feet throughout the Cascades. *Ribes acerifolium*. P.14
4. Leaves often 4 inches or more across, bearing 5 to 7 points; the lower bracts of the flower clusters expanded and leaf-like. Bushes of rank odor, growing in shaded, wet places throughout western Oregon. *R. bracteosum*. P.13
Leaves usually less than 4 inches across 3-5 lobed or pointed; the lower bracts of the flower clusters not expanded into leaf-like structures. Plants along streams and marshes in the timberlands of Oregon east of the crest of the Cascades. *R. petiolare*. P.14
5. Bushes trailing or only partially erect. Pass to Section 6.

Bushes erect or merely spreading.

Pass to Section 8.

6. Fruits red.

Pass to Section 7.

Fruits, black, Plants of the shaded or semi-shaded timberlands of western Oregon.

R. laxiflorum. P. 16

7. Seldom more than 1 foot high; leaves rarely 2 inches wide; plants of high altitude in the southern end of the Cascades.

R. erythrocarpum. P. 20

The erect portion of stems 2-4 feet high; leaves usually more than 2 inches wide. Shaded stream banks at altitudes from 3,000 to 6,000 feet. In Oregon probably confined to the northern end of the Cascades.

R. triste. P. 15

8. Fruits smooth, red, yellow, or black, flowers yellow; plants of exceedingly wide distribution throughout eastern Oregon and down the Columbia to The Dalles or lower.

R. aureum. P. 16

(See R. cereum Sec. 9.)

Fruits clothed with stalked glands.

Pass to Section 9.

9. Fruits red, usually bearing stalked glands, occasionally smooth. The typical currant of the arid region of eastern and southern Oregon.

R. cereum. P. 19

Fruits black.

Pass to Section 10.

10. Leaves with matted hairs on the under surface. Flowers red, showy. Common throughout western Oregon.

R. sanguineum. P. 17

Leaves without matted hairs on under surface but often with stalked glands,

Pass to Section 11.

11. Leaves nearly smooth, deep green above; flowers pink to red. Along shaded streams in Jackson, Josephine and Klamath Counties. R. nevadense P. 16
Leaves distinctly hairy. Pass to Section 12.
12. Leaves smooth above or nearly so, but bearing abundant stalked glands along the veins below. Probably confined to Coos and Curry Counties. R. glutinosum. P. 18
Leaves distinctly hairy above and densely glandular hairy below. Plants of the semi-open woods and burned-over areas, probably throughout the yellow pine region of Oregon. R. viscosissimum. P. 18
13. Low bushes with weak spines at the nodes; flowers or fruits several to many in a cluster; the stalks arranged symmetrically about a common axis; the fruit breaking from the fruit stalk by a joint close to the berry leaving it stemless. Prickly currants. Pass to Section 14.
Bushes of various heights with spines at the nodes, these often stout, flowers or fruits few to the cluster and these not symmetrically arranged on a common axis; fruits breaking from the fruit stalks well below the berry leaving a decided stem attached. True gooseberries. Pass to Section 15.
14. Fruits black; leaves smooth. The commonest currant in Oregon. In wet places in timber through the state. R. lacustre. P. 21
Fruits red; leaves with abundant gland-tipped hairs. Bushes of high altitude, often forming low matted clumps on exposed slopes. R. montigenum. P. 20

15. Berries densely covered with stiff spines, these oftenglant-tipped.

Pass to Section 16.

Berries not clothed with spines, either smooth, covered with stalked glands or hairy.

Pass to Section 20.

16. Leaves with abundant stalked glands beneath, young shoots densely clothed with purple or brown prickles. Probably confined in Oregon to Coos and Curry Counties.

Grossularia menziesii. P.21

Leaves smooth or hairy but with few or no stalked glands; young shoots not prickly.

Pass to Section 17.

17. Leaves very small, usually less than 1 inch across, smooth. A species probably confined to Jackson, Josephine and Klamath Counties.

G. cruenta. P.22

Leaves not noticeably small, hairy or clothed with stalked glands except in G. Marshallii.

Pass to Section 18.

18. Spines on the fruits dark purple or brown. A gooseberry confined to a limited area of Jackson and Josephine Counties.

G. Marshallii. P.24

Spines on the fruits straw colored; leaves hairy beneath, sometimes with some sparse stalked glands.

Pass to Section 19.

19. Trailing shrubs of forests of Jackson and Josephine Counties.

G. binominata. P.23

Erect shrubs of semi-open forests possibly confined to the extreme northern end of the Cascades of Oregon.

G. watsoniana. P.23

20. Berries densely clothed with stalked glands, these making the fruits very sticky or gummy; leaves likewise sticky due to stalked glands. The gummy goose-

berry of the open or burned-over areas from the crest of the Cascades westward. Possibly occurring on the east slopes of the Cascades, also. G. lobbii. P.24

Berries smooth or hairy, without stalked glands. Pass to Section 21.

21. Leaves conspicuously small, usually much less than one inch across, deeply 3-5 lobed, each lobe ending in three blunt lobes or teeth. The gooseberry of the desert regions of eastern Oregon. G. velutina. P.25

Leaves not noticeably small, mature ones being one inch or more across.

Pass to Section 22.

22. Leaves wedge shaped or straight across the base, smooth, shining; spines brown, shining; stamens and pistils conspicuously exerted, i.e., projecting beyond the end of the extended sepals. A species probably confined to the Columbia and Snake Rivers and their tributaries in eastern Oregon.

G. nivea. P.25

Leaves mostly heart-shaped at the base.

Pass to Section 23.

23. Leaves more or less hairy below, interspersed with the hairs of the under side of the leaves are very minute white, stalked glands usually visible only with a hand lens.

Pass to Section 24.

Leaves smooth or nearly so, and without the minute white stalked glands.

Pass to Section 25.

24. Young shoots usually prickly (this does not refer to the nodal spines present in most gooseberries). Leaves noticeably hairy and clothed with stalked glands on both sides; tube of the flower cylindrical. Widely distributed along streams in eastern Oregon. G. cognata. P.26

Young shoots usually smooth except for nodal spines; leaves usually smooth above but hairy below and clothed along the veins with stalked glands; tube of the flower bell-shaped. Possibly widely distributed along stream banks of eastern Oregon. *G. irrigua*. P. 27

25. Stamens and pistils exerted well beyond the extended sepals. The common black gooseberry of western Oregon.

G. divaricata. P. 27

Stamens about equalling the extended sepals. Pass to Section 26.

26. Leaves smooth or nearly so; tube of the flower and the sepals smooth; berry wine colored. Along mountain streams throughout eastern Oregon. *G. inermis*. P. 28
Leaves with long but rather sparse hairs; tube of the flower and sepals similarly clothed with sparse hairs; fruit black. Exposed, semi-arid country bordering yellow pine forests of Klamath County.

G. klamathensis. P. 28

KEY IN WHICH THE PARTS OF THE FLOWER
ARE CONSIDERED

1. Plants without spines or prickles or if with them the flower saucer-shaped, shallow, and the sepals extending nearly to the ovary. Fruit breaking from its stalk in such a manner that the berry is stemless. Pass to Section 2.

Plants with spines or with both spines and prickles. The sepals of the flower not extending practically to the ovary but to a distinct tube-shaped or bell-shaped structure, the hypanthium. Fruits

breaking from their individual stalks in such a manner that a stem is left attached to the fruit. Pass to Section 15.

2. Plants with spines or spines and prickles. Pass to Section 3.

Plants without spines or prickles.

Pass to Section 4.

3. Leaves smooth or nearly so; flower clusters 10-15 flowers; fruits black.

Ribes lacustre, P. 21

Leaves clothed with stalked glands; flower clusters 3-7 flowered; fruits red.

R. montigenum, P. 20

4. Ovaries with resin-dots.

Pass to Section 5.

Ovaries without resin dots.

Pass to Section 6.

5. Leaves very large, 4 inches or more across, 5-7 lobed; lower bracts of the flower clusters expanded and leaf-like.

R. bracteosum, P. 13

Leaves smaller, 3-5 lobed; the lower bracts of the flower cluster not expanded and leaf-like.

R. petiolare, P. 14

6. Hypanthium (portion of the flower between the sepals and the ovary) extremely short; the sepals barely united at their bases; flower saucer-shaped. Pass to Section 7.
Hypanthium evident at least half the length of the sepals. Pass to Section 10.

7. Ovaries smooth, fruit red. R. triste, P. 15
Ovaries with stalked glands, fruit usually black (red in R. erythrocarpum).

Pass to Section 8.

8. Extremely low trailing shrub (rarely 1 foot high); fruit red.

R. erythrocarpum, P. 20

Shrubs higher, 3-6 feet; fruits black with

- a bloom. Pass to Section 9.
9. Leaves with small resin-dots beneath; erect shrubs. R. acerifolium. P. 14
Leaves without resin-dots. R. laxiflorum. P. 16
10. Anthers with a conspicuous cup-shaped gland at the extreme point. Pass to Section 11.
Anthers with a mere cushion or callus at the extreme point. Pass to Section 12.
11. Tube of the flower $2\frac{1}{2}$ -4 times as long as broad; flower pink or red, rarely white. R. cerceum. P. 19
Tube of flower less than twice as long as broad, this due to the tube being expanded just above the ovary; flower white, yellowish-white or green. R. viscosissimum. P. 18
12. Tube of the flower smooth, golden-yellow (occasionally streaked with red) 3-4 times as long as broad. R. aureum. P. 16
Tube of the flower not smooth or golden-yellow. Pass to Section 13.
13. Tube of the flower and the extended sepals $\frac{1}{4}$ inch or less in length. R. nevadense. P. 16
Tube of the flower and the extended sepals $\frac{3}{8}$ to $\frac{1}{2}$ inch long. Pass to Section 14.
14. Leaves with matted hairs on the lower side. R. sanguineum. P. 17
Leaves without matted hairs below but with stalked glands especially along the veins. R. glutinosum. P. 18
15. Anthers much broader at the base than at the tip, i.e. coming to a pronounced point. Pass to Section 16.
Anthers not evidently broader at the base than at the tip. Pass to Section 17.
16. Tube of the flower about as long as broad, $\frac{1}{4}$ to $\frac{1}{2}$ the length of the sepals. Grossularia menziesii. P. 21

Tube of the flower much longer than broad,
about $\frac{1}{2}$ the length of the sepals.

G. cruenta. P. 22

17. Styles smooth throughout.

Pass to Section 18.

Styles hairy, at least toward the base.

Pass to Section 22.

18. Flowers deep red or purple; filaments
twice the length of the petals or more.

Pass to Section 19.

Flowers whitish, green or yellow.

Pass to Section 20.

19. Leaves densely clothed with stalked glands;
ovary gummy with stalked glands.

G. lobbii. P.

Leaves smooth above; ovary spiny.

G. marshallii. P. 24

20. Ovary densely bristly; the bristles de-
veloping into sharp spines.

Pass to Section 21.

Ovary not bristly.

G. velutina P. 25

21. Leaf blades without stalked glands; trail-
ing shrubs.

G. binominata. P. 23

Leaf blades with stout stalked glands;
erect shrubs.

G. watsoniana. P. 23

22. Sepals white, filaments more than twice
the length of the petals. G. nivea. P. 25
Sepals green or purplish, or if not, the
filaments less than twice the length of the
petals.

Pass to Section 23.

23. Stamens equalling the petals; leaves bearing
minute, white, stalked glands on their lower
surface.

Pass to Section 24

Stamens about twice the length of the petals;
leaves without the minute, white, stalked
glands.

Pass to Section 25.

24. Flower tube narrow, cylindrical, 2-4 times
as long as broad.

G. cognata. P. 26

12-a



Ribes bracteosum Dougl.
($\frac{1}{2}$ Nat. size)

Flower tube bell-shaped, nearly twice as broad as long. *G. irrigua*. P.

25. Stamens and styles exerted well beyond the end of the extended sepals.

G. divaricata. P. 27

Stamens and styles not exerted beyond the end of the extended sepals.

Pass to Section 26.

26. Leaves smooth; tube of the flower and sepals smooth. *G. inermis*. P. 27

Leaves with sparse, long hairs; tube of flower and sepals similarly clothed with sparse hairs. *G. klamathensis*. P. 28

RIBES BRACTEOSUM DOUGL.

Stink Currant

Height 5-10 feet or in dense shade 12 to 15 feet. Habit erect or the extremely long branches fallen or arched, young shoots heavy, often as thick as the little finger. Leaves when mature 5 inches or more across, deeply cut into 5-7 lobes, heart-shaped at the base, resin-dotted beneath. Flower and fruit clusters 5-15 inches long, mostly erect. Flowers or fruits loose in the cluster. Flowers small, inconspicuous, saucer-shaped. Fruits black when ripe, with a white bloom, bearing resin-dots.

Note: The very large 5-7 lobed leaves and large shoots of *R. bracteosum* readily separate it from *R. petiolare*. The resin-dots on its fruits separate it from *R. acerifolium* and the resin-dots on its leaves from all other currants and gooseberries of the state.

HABITAT AND DISTRIBUTION: *R. bracteosum* is widely and probably quite generally distributed throughout western Oregon from the crest of the Cascade Mountains, in wet, well drained,

shaded places. It will doubtless be found to some extent on the east slopes of the Cascades also.

RIBES PETIOLARE DOUGL.

Wild Black Currant

Height 3-6 feet. Habit erect. Leaves 2-4 inches wide, heart-shaped at base, bearing resin-dots on the under surface, otherwise smooth or nearly so, 3-5 lobed, the lobes sharply toothed. Flower clusters erect, 3-6 inches long, densely flowered near the end, loosely so below. Flowers not showy, saucer-shaped. Fruits black with a bloom and sessile, resin-dots, edible.

Note: *R. petiolare* has leaves closely resembling those of the cultivated black currant in size and shape. This separates it readily from *R. bracteosum* which has very large leaves. The resin-dots on the fruits of *R. petiolare* separate it from *R. acerifolium*, while resin-dots on the leaves separate it from other currants and gooseberries of the state.

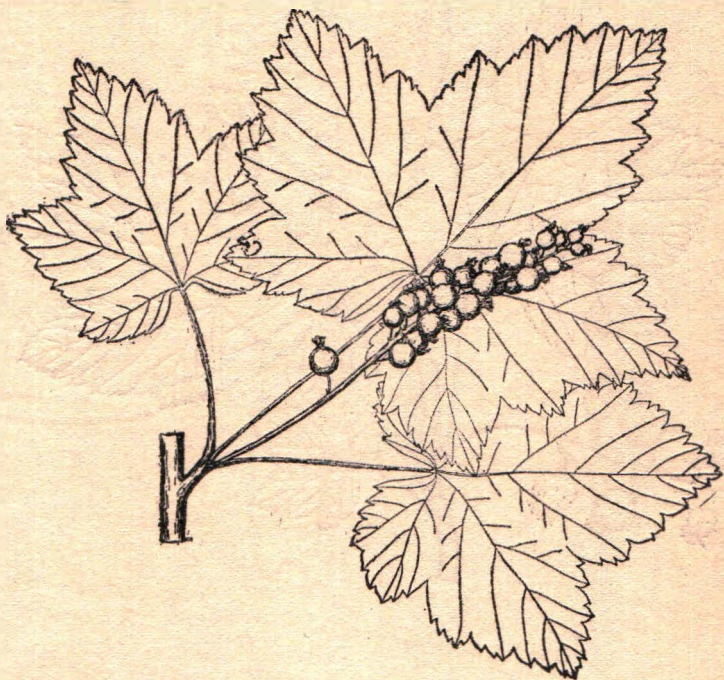
HABITAT AND DISTRIBUTION: *R. petiolare* grows along shaded streams and in shaded marshes from the crest of the Cascade Mountains eastward through the state, confining itself to timberland, 2,000 to 6,000 feet in elevation.

RIBES ACERIFOLIUM HOWELL

Maple Leaved Currant

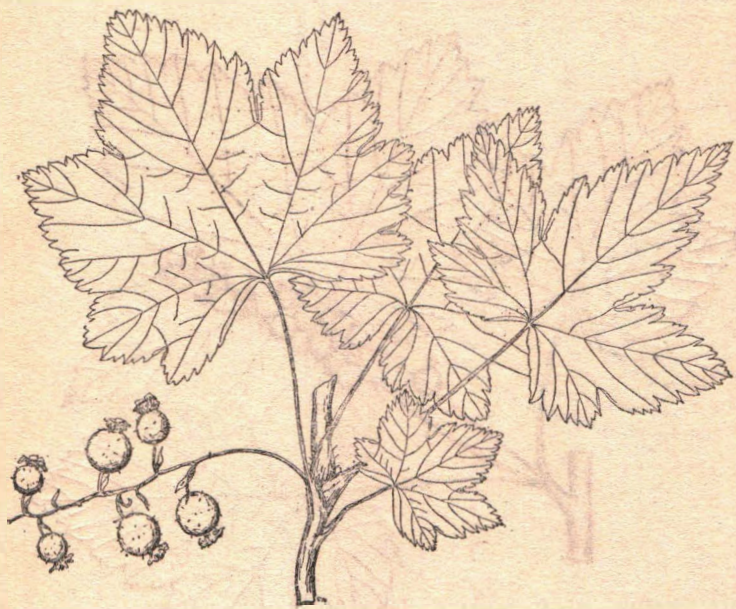
Height 2-5 feet. Habit erect. Leaves 3-5 lobed, heart-shaped at base and bearing light colored resin-dots below. (Often only visible with a hand lens.) Flower cluster

14-a



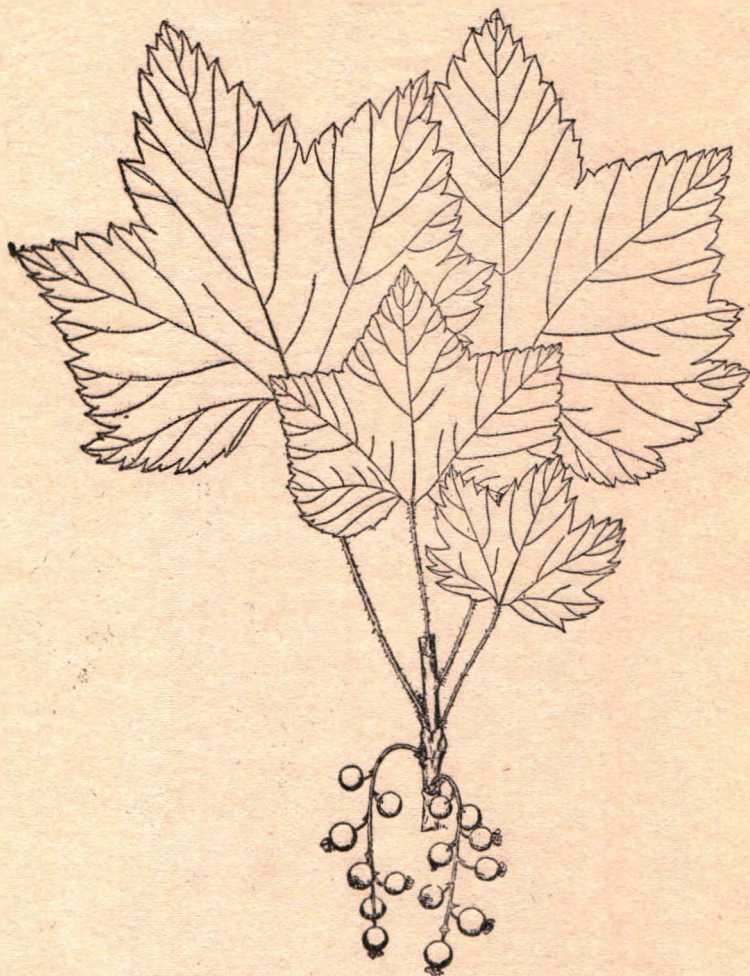
Ribes petiolare Dougl.
($\frac{1}{2}$ Nat. size)

14-b



Ribes acerifolium Howell
(4/5 Nat. size)

14-c



Ribes triste Pall.
(3/5 Nat. size)

5-15 flowered, the main stalk and individual flower stalks hairy and bearing gland-tipped hairs. Flowers inconspicuous, saucer-shaped. Fruits black when ripe, bearing gland-tipped hairs and a white bloom.

Note: The absence of resin-dots on the ovaries and fruits of this species separate it from the two preceeding species; the resin-dots on the leaves separate it from other currants and gooseberries of this region.

HABITAT AND DISTRIBUTION. Forming thickets on open slopes at altitudes of 3,000 - 6,000 feet, also along shaded streams and bordering belts of timber. Possibly to be found throughout the Cascades.

Ribes Triste Fall.

Wild Red Currant.

Height 2-5 feet high but trailing stems often 8 or 10 feet long. Habit, creeping with only the ends and fresh growth erect. Leaves 3-6 lobed, 2-4 inches across, smooth above and nearly or quite so below, the edges of the leaf stalks bearing long crinkled hairs. Flower clusters drooping, 5-15 flowered, all except the flowers having gland-tipped hairs. Flowers small, saucer-shaped. Fruits smooth and red when ripe resembling cultivated red currants in color and flavor.

Note: The trailing habit of this currant, and its smooth, red fruits serve to distinguish it from others. *R. laxiflorum* has a trailing habit but has black, glandular fruits.

HABITAT AND DISTRIBUTION: Shaded stream banks and marshes, probably confined in Oregon to the northern end of the Cascade Mountains at altitudes of 3,000 - 6,000 feet.

RIBES LAXIFLORUM PURSH

Coast Trailing Currant

Height 3-5 feet, trailing stems often longer. Habit erect or ascending only near the ends. Leaves, 5 lobed, 2-3 inches across, somewhat hairy along the veins below or smooth with age. Flower cluster 8-15 flowered. Flowers inconspicuous, saucer-shaped. Fruit black with a bloom, bearing stalked glands.

Note: The black fruits with stalked glands readily separate this plant from *R. triste*. Also note its range.

HABITAT AND DISTRIBUTION. Damp situations in the timber and burned-over areas throughout western Oregon west of the Cascade Mountains.

RIBES NEVADENSE KELLOGG

Height 4-10 feet. Habit erect. Leaves 1.5 - 3 inches wide, 3-5 lobed, smooth above and nearly or quite so below. Flower clusters densely 12-20 flowered. Flowers rose-colored, bowl-shaped. Fruit black with bloom and stalked glands.

Note: *R. nevadense* is very similar to *R. sanguineum* and *R. glutinosum* but is readily distinguished by the smooth leaves, *R. sanguineum* having matted hairs on the under side and *R. glutinosum* having stalked glands.

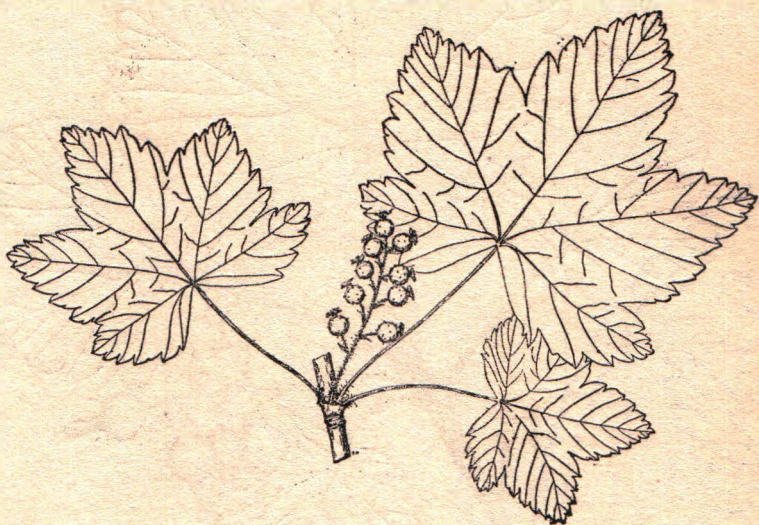
HABITAT AND DISTRIBUTION. Along shaded or semi-shaded streams in the timbered regions in Jackson, Josephine and Klamath Counties.

RIBES AUREUM PURSH

Yellow-Flowering Currant.

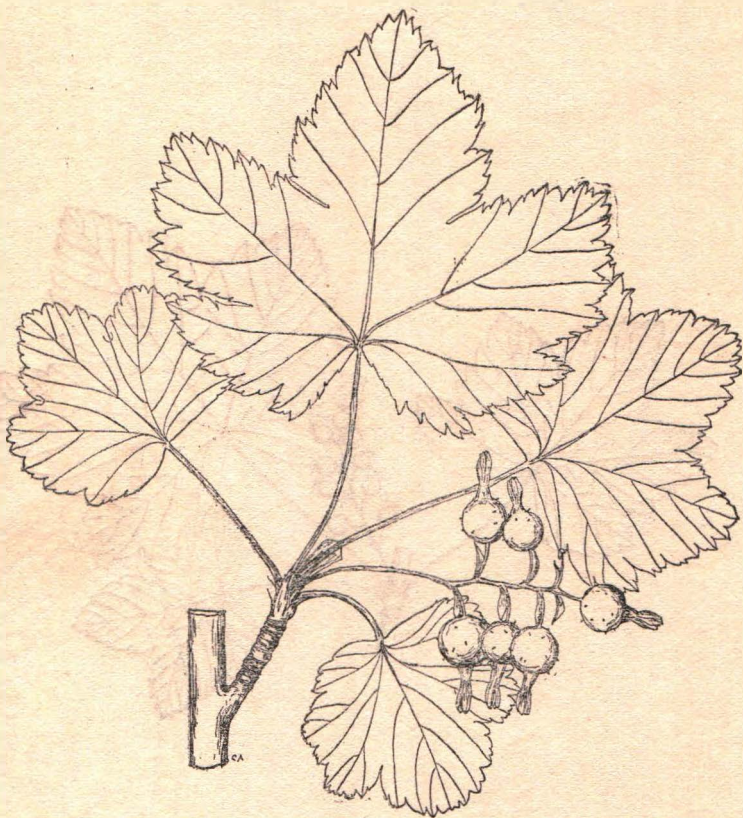
Height 3-10 feet. Habit erect, in dense brush and willows sometimes almost twining.

16-a

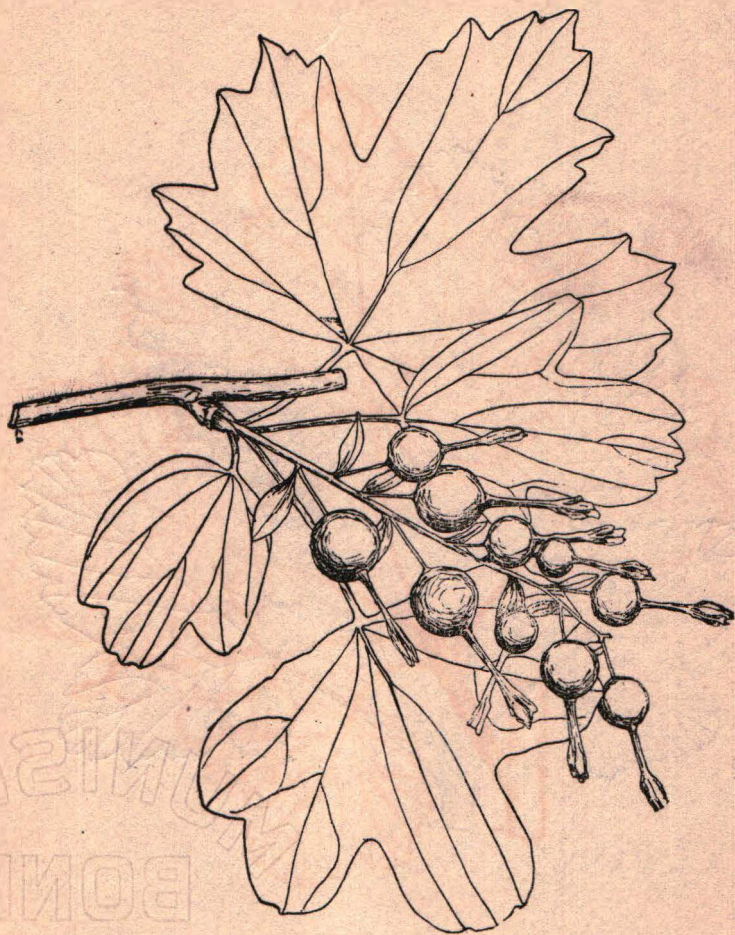


Ribes laxiflorum Pursh
(2/3 Nat. size)

16-b

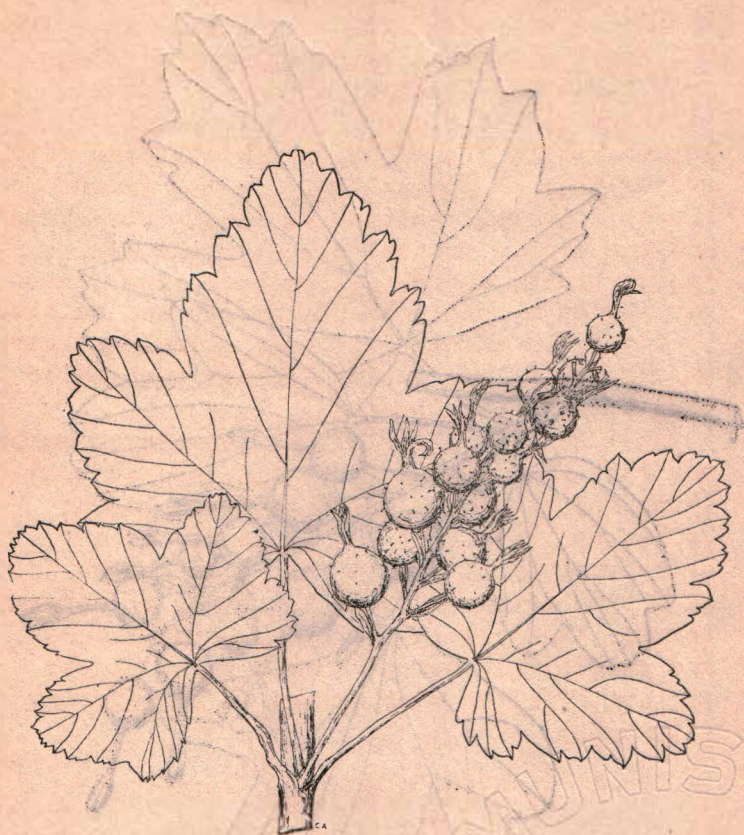


Ribes nevadense Kellogg
(Nat. size)



Ribes aureum Pursh
(Nat. size)

16-d



Ribes sanguineum Pursh
(Nat. size)

Leaves smooth and shining, light green, 1-2 inches wide, exceedingly variable from 3-lobed and wedged-shaped at the base to 5-lobed and heart-shaped at base. Flower clusters, 5-15 flowered, erect or drooping, loosely arranged on the stalk. Flowers usually bright golden yellow but occasionally streaked with red or this predominating. In the fresh flower, the main portion is long, tube-shaped and the sepals project out at right angles. Fruits black, red or yellow when ripe (never varying on a single bush), smooth and edible.

Note: The smooth hairless, glandless leaves, smooth fruits and yellow flowers are characteristic of this species.

HABITAT AND DISTRIBUTION. Common throughout eastern Oregon east of the Cascade Mountains and along the Columbia River to The Dalles or lower. It adapts itself to a great variety of conditions, being often found in rather dense shade on the banks of streams, forming thickets in the open, moist places, and exceedingly common on the talus slopes of lava hills in what appear to be very dry situations.

RIBES SANGUINEUM PURSH
Red-Flowering Currant.

Height 4-12 feet. Habit erect. Leaves 3-5 lobed, $1\frac{1}{2}$ - 3 inches wide, dark green above, clothed sparsely with short hairs, gray or white below due to matted hairs, often bearing stalked glands as well. Flower clusters erect or somewhat drooping, 10-15 flowered. Flowers bell-shaped, red. Fruits black with a bloom and stalked glands.

Note: The matted hairs on the under surface of the leaves separate this species from *R. nevadense* and *R. glutinosum*, its close relatives.

HABITAT AND DISTRIBUTION. Throughout western Oregon west of the Cascade Mountains and doubtless on the eastern slopes of the mountains in semi-shaded and open timber lands on slopes, and the timbered edges of the drier flats.

RIBES GLUTINOSUM BENTH.

Height 4-12 feet. Habit erect. Leaves 3-5 lobed, $1\frac{1}{2}$ - 3 inches wide, usually without matted hairs below, but clothed with stalked glands especially along the veins below, normally smooth or nearly so above. Flower cluster 15-40 flowered, compact near the end but loose below, the main stalk and stalks to individual flowers having stalked glands. Flowers red, rarely white, narrowly bell-shaped. Fruit black, bearing stalked glands and a white bloom.

Note: This is similar to *R. sanguineum* but can be separated from it by the abundance of stalked glands on the leaves and flower clusters, and by the absence of the pronounced matted condition of the hairs on the under surface of the leaves.

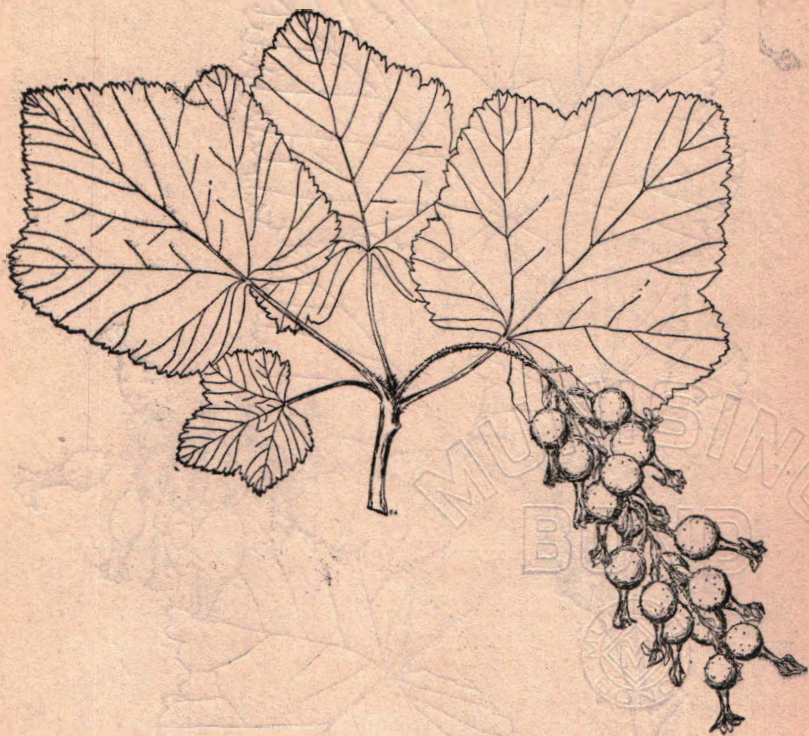
HABITAT AND DISTRIBUTION. Probably confined to Coos and Curry Counties in situations similar to those occupied by *R. sanguineum*.

RIBES VISCOSISSIMUM PURSH

Sticky Currant

Height 3-5 feet. Habit erect but spreading.

18-a



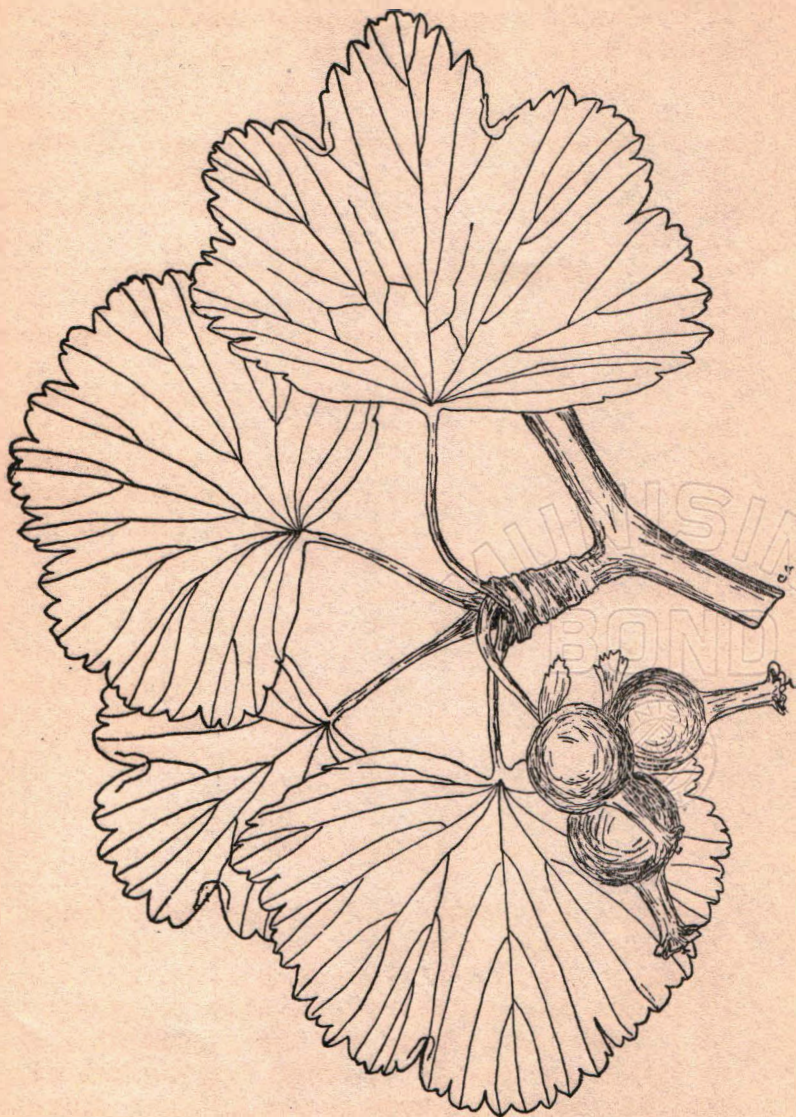
Ribes glutinosum Benth.
(2/3 Nat. size)

18-b



Ribes viscosissimum Pursh
(5/6 Nat. size)

18-c



Ribes cereum Dougl.
(2 X Nat. size)

Leaves 1-3 inches wide, 3-5 lobed, clothed with stalked glands, sparsely above, abundantly below; sticky to the touch, the lobes rounded. Flower clusters short, loose, usually 3-8 flowered but occasionally as high as 20 flowered, the stalks and bracts of the cluster bearing stalked glands. Flower when fresh a bell with a narrow mouth, appearing in the dried fruit broadly tubular, light green, sometimes tinged with purple when fresh. Fruit black, bearing a bloom and stalked glands, noticeably ribbed and much longer than broad.

Note: The abundant stalked glands on the leaves and fruits, the broad green flowers, and long ribbed fruits are characteristic of this species. *R. hallii* Jancz. differs from *R. viscosissimum* in having smooth fruits.

HABITAT AND DISTRIBUTION. Generally found in the open yellow pine forests on slopes and rocky points, occurring on the north facing slopes of the Cascades near the Columbia River, the eastern slopes of the Cascades, the mountains in the vicinity of Ashland and doubtless throughout eastern Oregon in favorable situations.

RIBES CEREUM DOUGL.

Height 3-5 feet. Habit erect but spreading, the branches stiff. Leaves grayish green, $\frac{1}{2}$ - $1\frac{1}{2}$ inches wide, only slightly lobed but evenly toothed, usually hairy on both faces and bearing stalked glands or sometimes smooth above, often bearing white, exuding, sessile glands above. Flower clusters 1-5 flowered, drooping. Flowers tubular, pink or whitish, covered with short hairs. Fruits red, smooth or occasionally

with a few stalked glands.

Note: The range; color of the fruits and character of the leaves should distinguish this currant.

HABITAT AND DISTRIBUTION. Throughout eastern Oregon on open slopes and rocky points and ridges.

RIBES ERYTHROCARPUM COVILLE & LEIBERG

Height of erect portion less than 1 foot but the main stems long and trailing. Leaves finely hairy and bearing stalked glands, 2 inches or less in width, 3-5 lobed, the lobes rounded. Flower clusters 6-20 flowered, erect, short hairy. Flowers yellow or salmon-colored, very small, saucer-shaped. Fruits red, bearing short stalked glands.

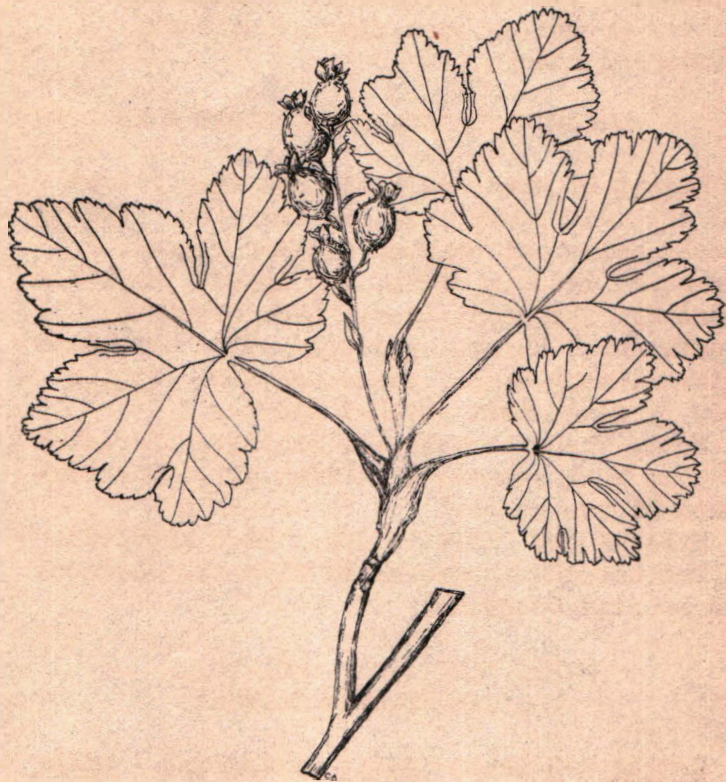
Note: The extremely low trailing character of this bush separates it from all other currants of the state.

HABITAT AND DISTRIBUTION. High altitudes in the Cascade Mountains of Klamath, Jackson, and Douglas Counties.

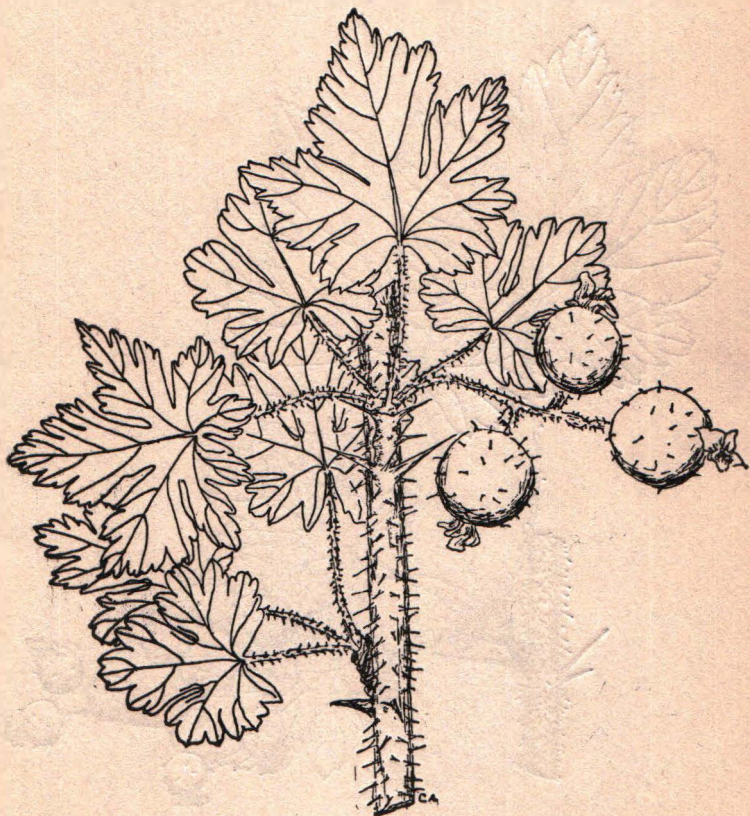
RIBES MONTIGENUM McCLATCHIE

Alpine Prickly Currant

Height 1-3 feet. Habit straggling. Stems bearing weak spines at the nodes and to some extent smaller ones between the nodes. Leaves $\frac{1}{2}$ - $1\frac{1}{2}$ inches wide, clothed above and below with stalked glands, 3-5 lobed, the lobes sharp pointed and toothed. Flower clusters drooping, 5-10 flowered, the main stalk and flower stalks clothed with stalked glands. Flowers green to purple, small, saucer-shaped.

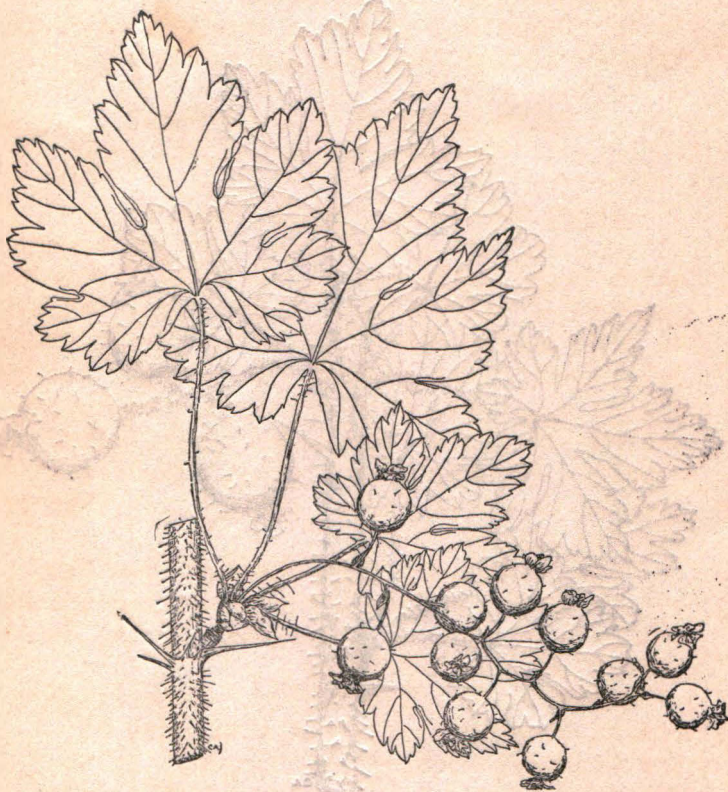


Ribes erythrocarpum
Coville & Leiberg
(Nat. size)



Ribes montigenum McClatchie
(2 X Nat. size)

20-c



Ribes lacustre (Pers.) Poir.
(1 1/3 X Nat. size)

Fruits red, bearing stalked glands.

Note: This is a true currant (see key) but resembles a gooseberry in having spines and bristles. The stalked glands and red fruits distinguish it from *R. lacustre*.

HABITAT AND DISTRIBUTION. Open slopes, rocky ridges and mountain tops, at high altitudes in the Cascades and eastward.

RIBES LACUSTRE (PERS.) POIR.

Prickly Currant.

Height 3-5 feet. Habit erect or reclining and often trailing. Spines at the nodes weak, often bristly between the nodes. Leaves 1-2 inches wide, rarely more, smooth on both faces, deeply lobed or divided into 3-5 lobes, these pointed and sharply toothed. Flower clusters, 5-15 flowered, the main stalks and flower stalks bearing stalked glands. Flowers small, green tinged with purple, saucer-shaped. Fruit black, bearing stalked glands.

Note: This is a true currant (see key) but resembles a gooseberry in having spines. Separate it from *R. montigenum* by the smooth leaves and black fruits.

HABITAT AND DISTRIBUTION. Exceedingly common at practically all altitudes in the timbered sections of Oregon. It is moisture-loving but is occasionally found in comparatively dry situations.

GROSSULARIA MENZIESII (PURSH) COVILLE
& BRITTON

Menzies Gooseberry

Height 5-6 feet. Habit erect, spreading.

Spines at nodes straight, sharp, about $\frac{1}{2}$ inches long. Internodal bristles abundant on young shoots giving same a distinctly brown or purple color. Leaves deeply 3-5 lobed, cordate at the base, 1-1 $\frac{1}{2}$ inches wide, densely clothed with stalked glands below, usually slightly so above. Flower clusters 1-2 flowered, drooping, the flower stalks bearing stalked glands. Flowers showy, purple, the young ovary densely clothed with stiff gland-tipped hairs. Fruit a purple hue, densely bristly, the bristles weak and many of them gland-tipped.

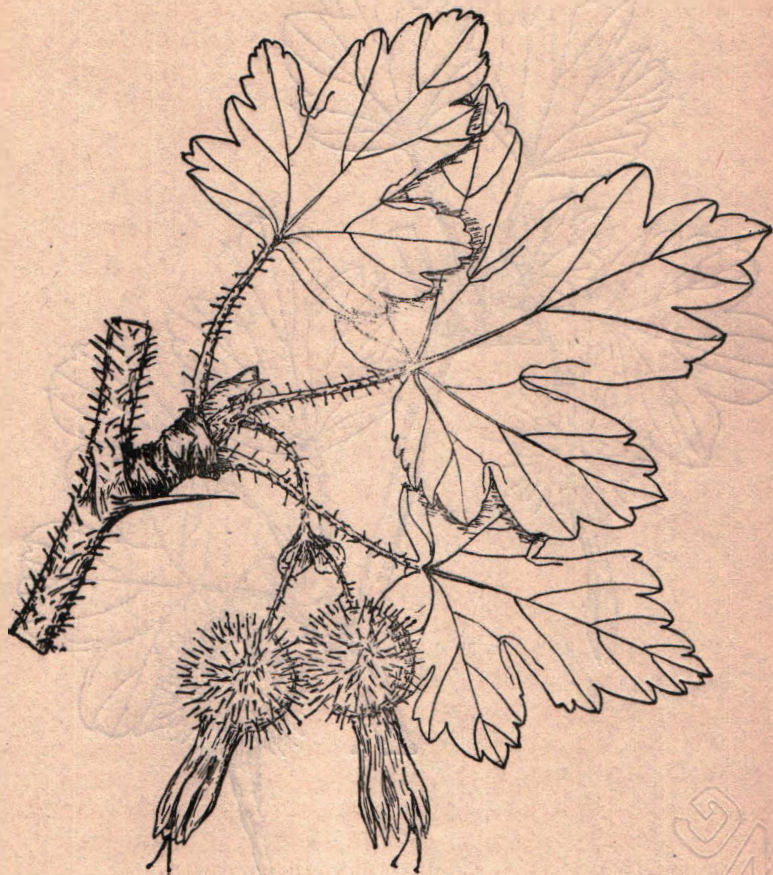
Note: This is one of the spiny-fruited gooseberries. It can be separated from the others of the group by the densely spiny young shoots and the abundant stalked glands on the under side of the leaves.

HABITAT AND DISTRIBUTION. Open slopes and skirting belts of timber in Coos and Curry Counties.

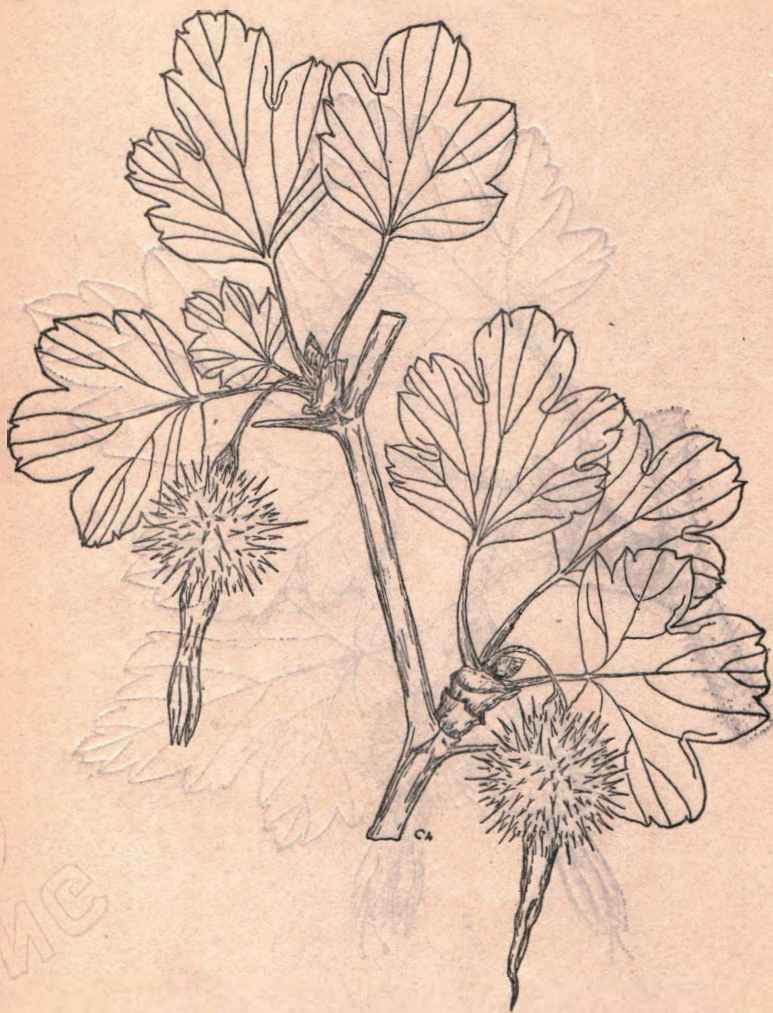
GROSSULARIA CRUENTA (GREENE)
COVILLE & BRITTON

Height 4-6 feet. Habit erect, spreading. Spines confined to the nodes, the young wood otherwise smooth or slightly hairy. Leaves small $\frac{1}{2}$ - 1 inch wide, smooth. Flower clusters 1-2 flowered. Flowers purplish red; showy. Fruit densely spiny, spines brown to purple.

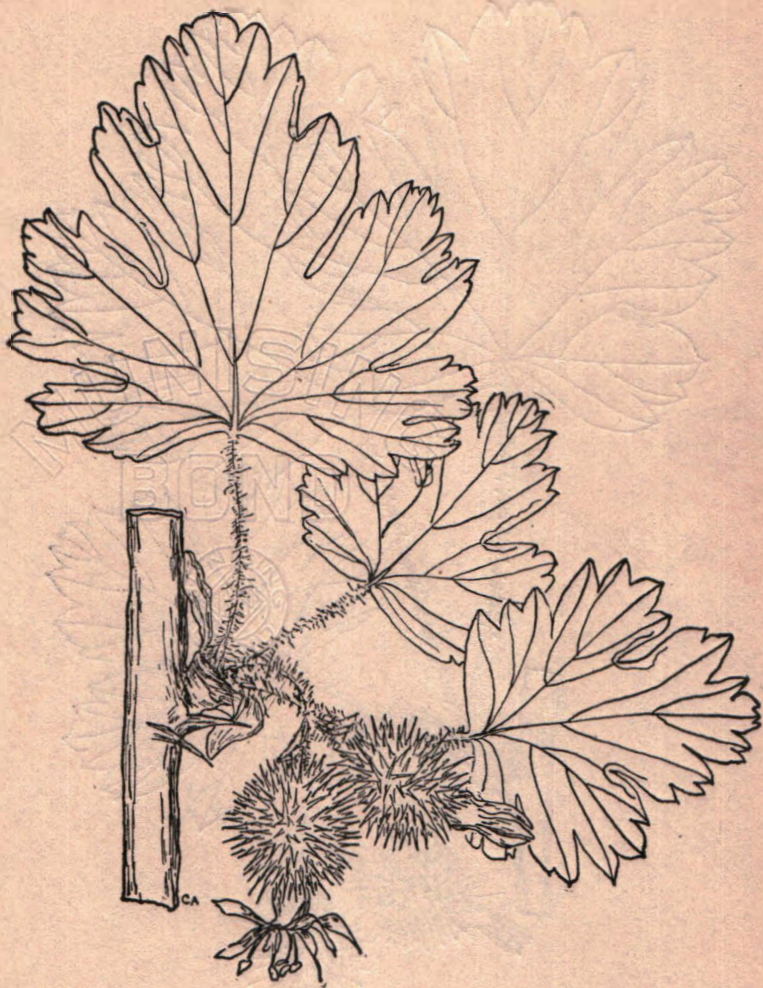
Note: This is a close relative of *G. menziesii* but has small, smooth leaves and smooth young shoots. The smooth leaves and erect habit separate it from *G. binominata*, and the smooth leaves and dark spines on the fruits separate it from *G. watsoniana*.



Grossularia menziesii Pursh
Coville & Britton
($1\frac{3}{4}$ Nat. size)

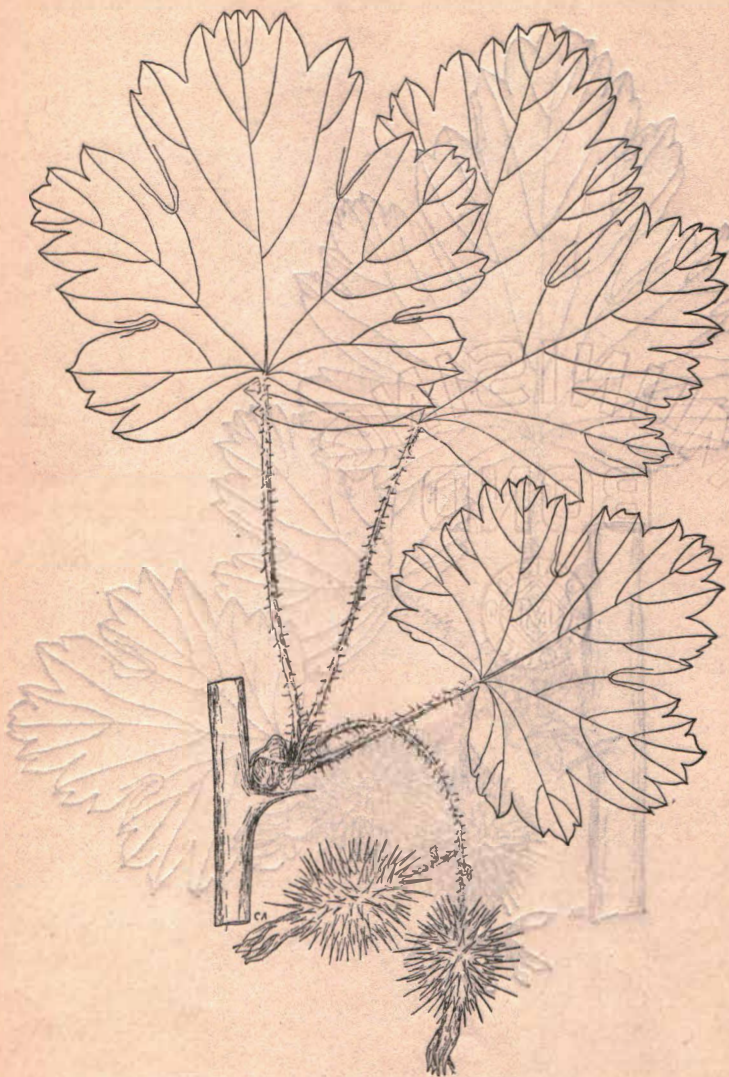


Grossularia cruenta (Greene)
 Coville & Britton
 (1 3/5 X Nat. size)



Grossularia binominata (Heller)
Coville & Britton
(Nat. size)

22-d



Grossularia watsoniana (Koehe)
Coville & Britton
(Nat. size)

HABITAT AND DISTRIBUTION. Probably confined to Jackson, Josephine, and Klamath Counties.

GROSSULARIA BINOMINATA (HELLER)
COVILLE & BRITTON

Height 2-5 feet. Habit trailing. Spines short, brown, confined to the nodes. Leaves 1-2 inches wide, densely clothed with short white hairs below, moderately so above, 3-5 lobed, the lobes deeply toothed. Flower clusters 1-3 flowered, the stalks hairy. Flowers greenish white, the sepals hairy on the outside. Fruits densely clothed with straw-colored spines.

Note: The trailing habit of this plant readily distinguishes it from the other prickly-fruited gooseberries.

HABITAT AND DISTRIBUTION. Forests of Jackson and Josephine Counties.

GROSSULARIA WATSONIANA (KOEHNE)
COVILLE & BRITTON
Watson's Gooseberry

Height 3-5 feet. Habit erect, spreading. Spines confined to the nodes, short, straight, light brown. Leaves sparingly hairy along the veins below, 1-2½ inches wide, deeply 3-5 lobed, the lobes deeply toothed. Flower clusters 1-3 flowered, the stalks bearing stalked glands. Flowers inconspicuous, the young ovary clothed with weak gland-tipped bristles. Fruit densely clothed with straw-colored spines.

Note: The erect habit of this bush and its straw-colored spines on the fruit separate it from other members of this group.

HABITAT AND DISTRIBUTION. Not reported from Oregon but probably occurring in wet places or north slopes in semi-open forests in the Cascade Mountains south of the Columbia River.

GROSSULARIA LOBBII (A. GRAY)

COVILLE & BRITTON

Gummy Gooseberry.

Height 3-6 feet. Habit erect, spreading. Spines rather stout, straight, brown, confined to the nodes. Leaves $\frac{1}{2}$ - $1\frac{1}{2}$ inches wide, the under surface and leaf stalks somewhat gummy because of very short gland-tipped hairs or stalked glands, the upper surface occasionally slightly hairy, 3-5 lobed. Flower clusters 1-2 flowered. Flowers large, showy, purple-red. Fruit densely clothed with large stalked glands, very gummy, large.

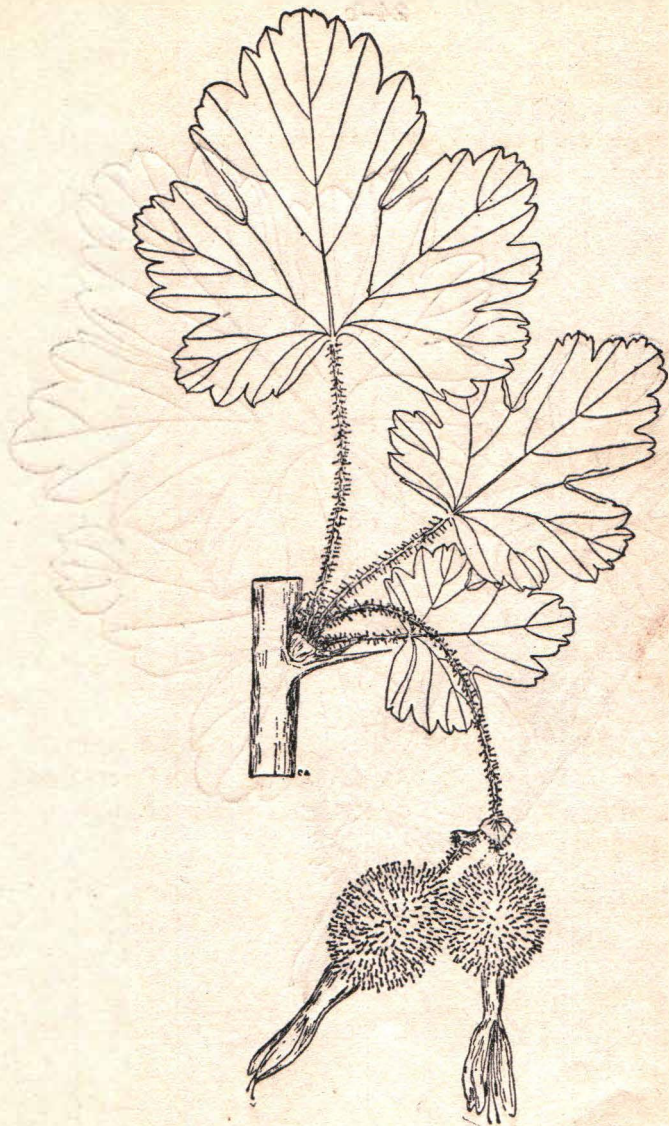
Note: The gummy fruits bearing no spines, characterize *G. lobbia*.

HABITAT AND DISTRIBUTION. Open slopes and burned-over areas from the crest of the Cascades to the coast. Possibly occurring also on the eastern slopes.

GROSSULARIA MARSHALLII (GREENE)

COVILLE & BRITTON

Height 3-6 feet. Habit erect, spreading. Spines short, confined to the nodes. Leaves 1-2 inches wide, thin, slightly hairy along the veins below, deeply 3-5 lobed, the lobes blunt-toothed. Flowers borne singly, purple or greenish. Fruit black, with remote short spines and when younger with stalked glands also.



Grossularia lobbii (A. Gray)
Coville & Britton
(Nat. size)

24-b



Grossularia marshallii (Greene)
Coville & Britton
(1 1/3 X Nat. size)



Grossularia velutina (Greene)
Coville & Britton
(3 X Nat. size)

24-d



Grossularia nivea (Lindl.) Spach.
($1\frac{1}{2}$ Nat. size)

Note: The short, remote spines on the fruit of this bush are characteristic.

HABITAT AND DISTRIBUTION. Jackson and Josephine Counties.

GROSSULARIA VELUTINA (GREENE)

COVILLE & BRITTON

Desert Gooseberry

Height 2-6 feet. Habit erect or widely spreading with stems recurved. Leaves very small, usually about $\frac{1}{2}$ inch wide, grayish-green, clothed with short hairs on both sides, 3-5 lobed, each lobe ending in three blunt teeth. Spines confined to the nodes, often stout, long and somewhat curved. Flower clusters 1-3 flowered, very short. Flowers, pale yellow, hairy without, ovary densely hairy, sometimes with stalked glands. Fruit yellow or gray, usually densely hairy, ripening almost dry.

Note: The small grayish-green leaves with distinctly three-toothed lobes are excellent marks for this bush.

HABITAT AND DISTRIBUTION. This bush grows below cliffs and among rocks on steep slopes in arid regions. It is probably quite general in the south, southeast, and eastern part of Oregon.

GROSSULARIA NIVEA (LINDL.) SPACH.

Snake River Gooseberry.

Height 5-10 feet. Habit erect, the stems and branches slender and graceful. Spines confined to the nodes, stout, straight, shining, brown or purplish. Leaves smooth or nearly so, wedge-shaped at the base or

straight across, 3-5 lobed, the lobes few-toothed. Flower clusters 1-4 flowered, the main stalks and individual flower stalks long and slender. Flowers white, bell-shaped, the stamens and style-branches protruding well beyond the extended sepals even in the dried flower attached to the fruit. Fruit smooth, bluish-black.

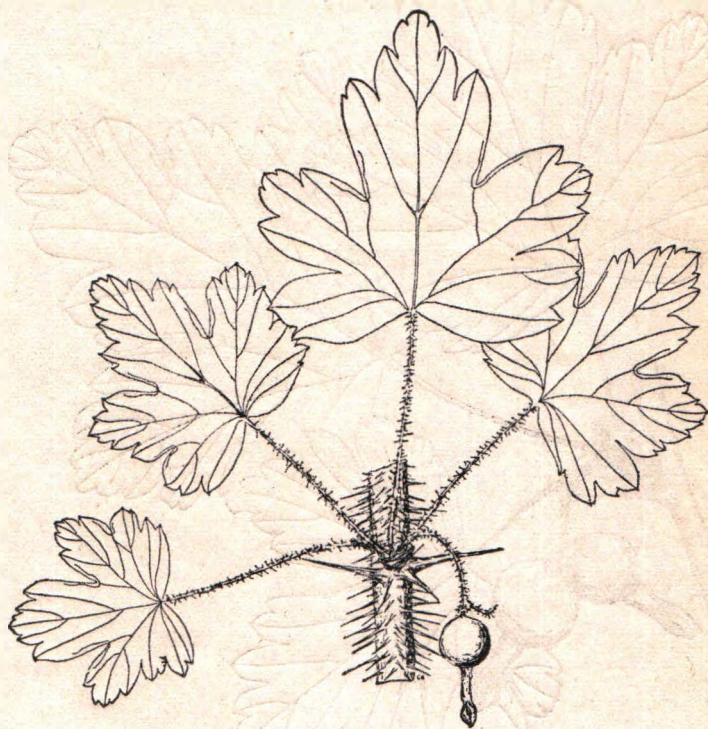
Note: The long slender stalks to the flower clusters and flowers, the leaves wedge-shaped at the base, the dark spines and the protruding stamens and style-branches mark this gooseberry.

HABITAT AND DISTRIBUTION. Probably confined to the banks of the Columbia and Snake Rivers, and their tributaries in northeastern and eastern Oregon.

GROSSULARIA COGNATA (GREENE)
COVILLE & BRITTON

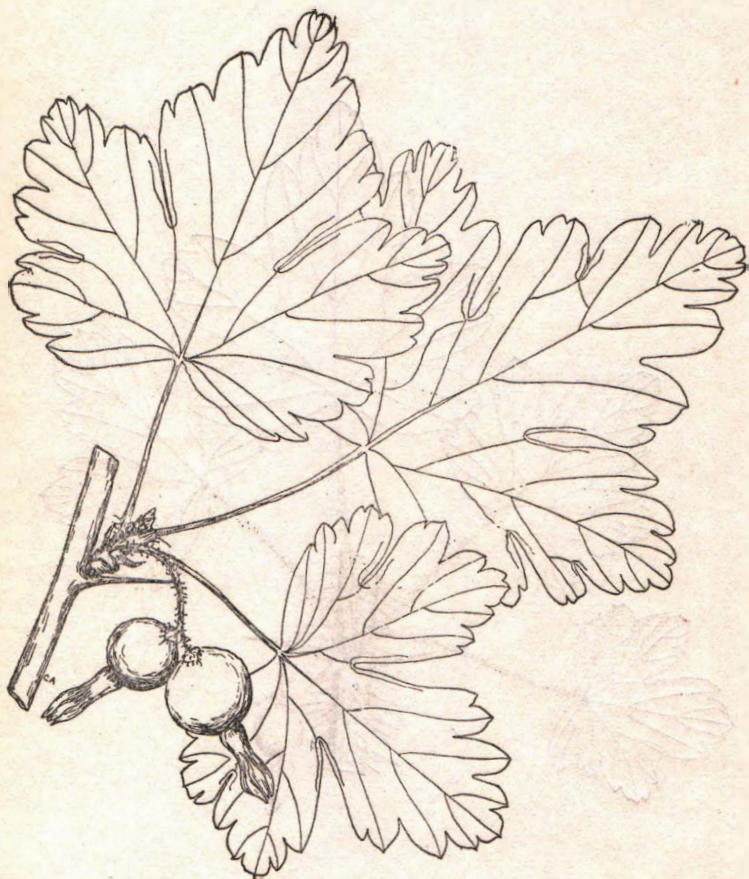
Height 5-10 feet. Habit erect but widely spreading. Spines on the nodes often stout, bristles usually abundant on the young wood and often retained for some time, rarely absent on young wood. Leaves 1-2 inches wide, smooth and sparsely hairy above, often whitened with short woolly hairs below, bearing also minute, white, stalked glands on the lower surface, heart-shaped at base, deeply 3-5 lobed, the lobes blunt toothed. Flower clusters 2-5 flowered. Flowers tubular, light green to purple, inconspicuous. Fruits smooth, purple to black.

Note: Notice in the key that the minute, white, stalked glands on the under side of the leaves are characteristic of *G. cognata* and *G. irrigua*. Separate *G. cognata* from *G. irrigua* by the bristly young wood and tube-shaped flower of the former contrasted with the smooth young



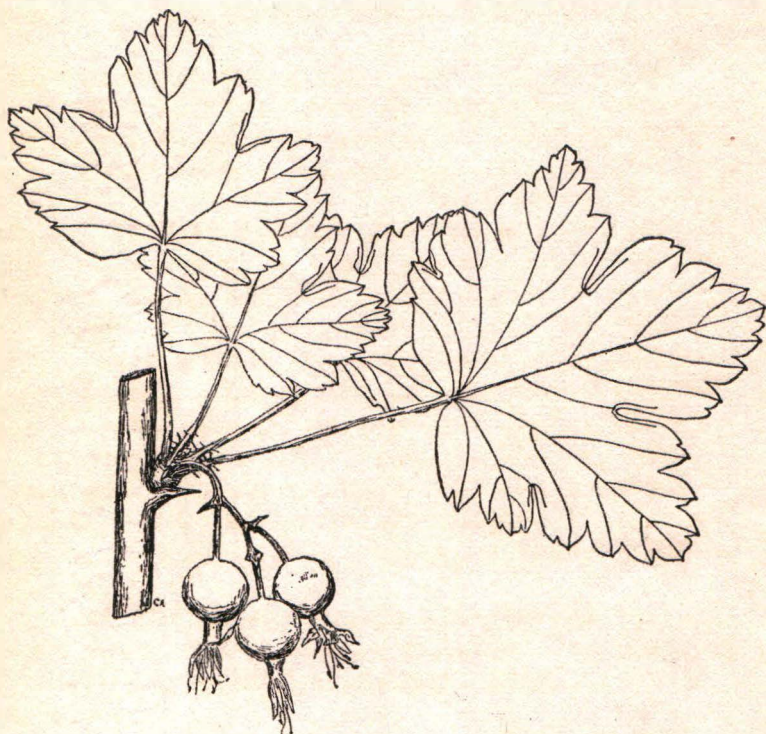
Grossularia cognata (Greene)
Coville & Britton
($\frac{7}{8}$ Nat. size)

26-b



Grossularia irrigua (Dougl.)
Coville & Britton
($1\frac{1}{2}$ Nat. size)

26-c



Grossularia divaricata (Dougl.)
Coville & Britton
(Nat. size)

wood and bell-shaped flower of the latter.

HABITAT AND DISTRIBUTION. Possibly widely distributed along streams in eastern Oregon.

GROSSULARIA IRRIGUA (DOUGL.)

COVILLE & BRITTON

Inland Black Gooseberry.

Height 3-10 feet. Habit erect but widely spreading. Spines on nodes varying from short and weak to stout, internodal bristles usually absent. Leaves 1-2 inches wide, densely hairy below but except for minute, white, stalked glands, without stalked glands, 3-5 lobed, the lobes varying from narrow and pointed to broad and blunt, the lobes coarsely toothed. Flower clusters 1-3 flowered. Flowers greenish-white, not showy, bell-shaped, fruit smooth, purple or black.

Note: Read the note on *G. cognata*.

HABITAT AND DISTRIBUTION. Described from the Blue Mountains of north-eastern Oregon. Possibly occupying stream banks over a wide range of eastern Oregon.

GROSSULARIA DIVARICATA (DOUGL.)

COVILLE & BRITTON

Coast Black Gooseberry.

Height 6-10 feet. Habit erect, spreading. Nodal spines usually very heavy, long, straight or curved, brown or purple, internodal bristles only occasionally present. Leaves 1-2½ inches wide, the upper surface usually bearing sparse, long hairs, the lower short hairs along the veins, or none, 3-5 lobed, the lobes rather sharply toothed. Flower clusters drooping, 2-4 flowered, the stalks quite long and slender. Flowers,

not showy, bell-shaped, the stamens and style-branches protruding well beyond the extended sepals even in the dried flower attached to the fruit. Fruit smooth, black.

Note: The exerted stamens and style-branches of this plant separate it from other members of the group. Notice that it does not bear the minute, white, stalked glands on the under surface of the leaves.

HABITAT AND DISTRIBUTION. Skirting wooded sections throughout western Oregon from the base of the Cascade Mountains.

GROSSULARIA INERMIS (RYDB.)

COVILLE & BRITTON

White Stemmed Gooseberry

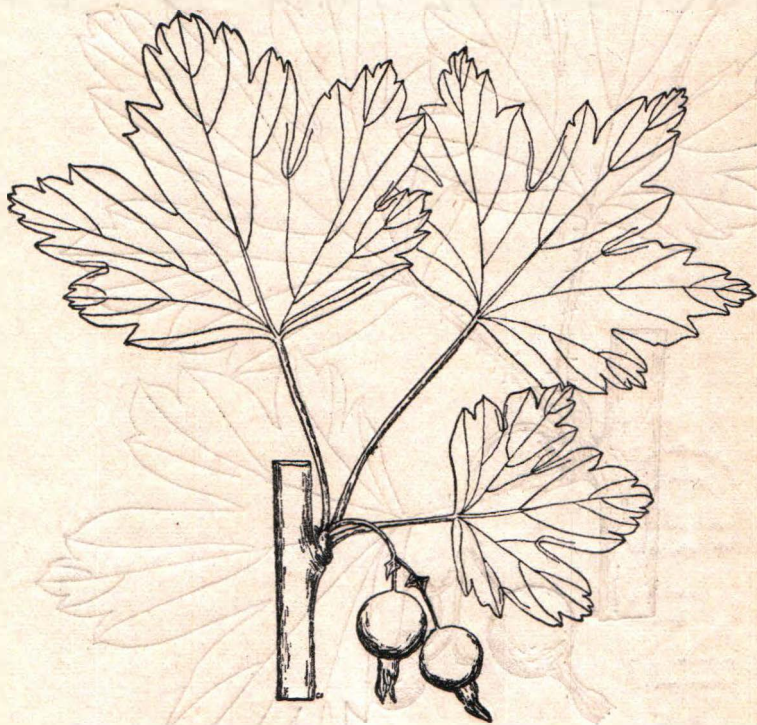
Height 3-6 feet. Habit erect, spreading. Nodal spines weak, sometimes wanting, internodal bristles usually absent. Leaves smooth or straight across the base, 3-5 lobed, the lobes round toothed. Flower clusters short, drooping, 1-4 flowered. Flowers green, bell-shaped, sepals smooth. Fruits smooth, wine-colored.

Note: The smooth leaves and flowers of this plant readily separate it from the *G. klamathensis* with its hairy leaves and hairy sepals on the flowers.

HABITAT AND DISTRIBUTION. Probably widely distributed along mountain streams throughout eastern Oregon.

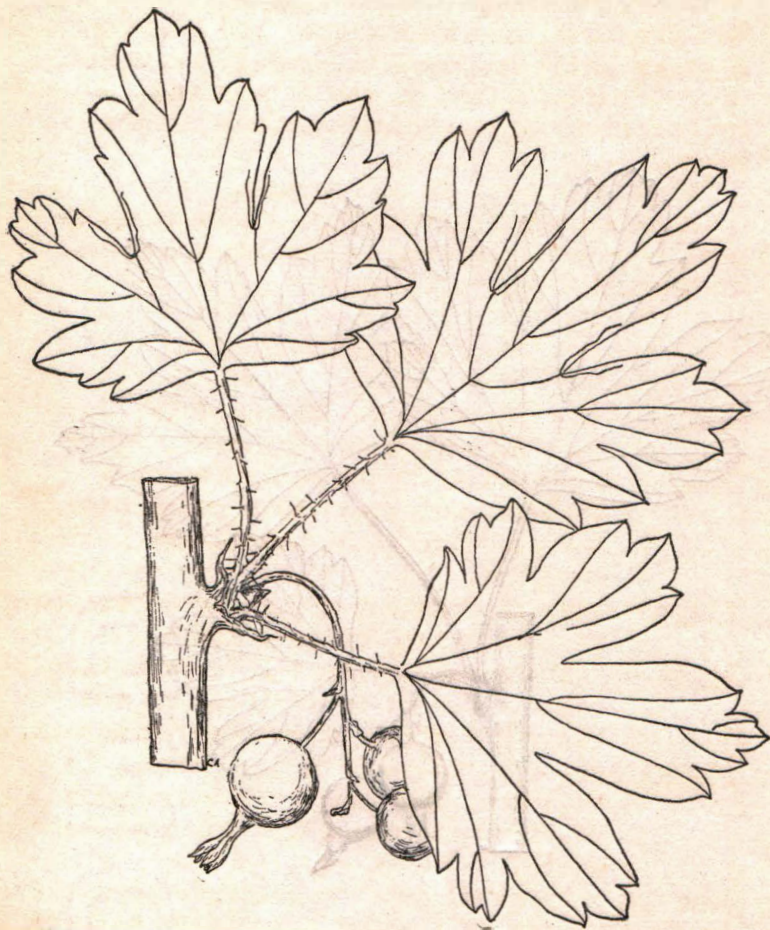
GROSSULARIA KLAMATHENSIS COVILLE

Height 3-6 feet. Habit erect, spreading. Nodal spines usually absent, if present weak, internodal bristles absent. Leaves 1-2 inches wide, smooth above but quite hairy below,



Grossularia inermis (Rydb.)
Coville & Britton
(1 1/3 Nat. size)

28-b



Grossularia klamathensis Coville
(1 3/5 Nat. size)

3-5 lobed, the lobes spreading leaving open sinuses, coarsely toothed. Flower clusters 2-5 flowered, the stalks long and slender. Flowers green or purplish, small, bearing long crinkled hairs on the sepals and hypanthium. Fruits smooth, black with a bloom.

Note: See note on *G. inermis*.

HABITAT AND DISTRIBUTION. Exposed semi-arid country bordering yellow pine forests in Klamath County, Oregon.

GLOSSARY

Anther - The organ in the flower which bears the pollen, a powdery dust.

Berry - A simple fruit in which the skin encloses the seeds in a pulpy mass. The gooseberry and tomato are good examples.

Bloom - A white, powdery appearing substance on the surface of some fruits.

Bract - A small leaf or leaf-like structure below a flower or fruit or at the base of a stalk or similar structure.

Dichotomous - Branched into two parts. In this key referring to the division of the sections of the key into two parts.

Exuding - Pressing out of substance gradually.

Filament - The portion of the stamen between the anther and the tube of the flower. The stem portion of the stamen.

Gland - An organ that excretes some substance or seems to do so. The glands on leaves and fruits may be stalked or without stalks and may give the plant a distinct odor and stickiness.

Glandular - Bearing glands or of the nature of glands.

Gland-tipped. - Applied here to hairs or spines which bear glands on their summits.

Hypanthium - The portion of the flower just above the ovary or young fruit. It is formed from the union of the sepals at their bases.

Ovary - The portion of the flower which becomes the fruit.

Pistil - Here referring to the organ in the center of the flower. It should be understood to include the ovary also.

Resin-dot - A gland without stalk which resembles resin.

Sepal - One leaf of the outer whorl of leaves of the flower. In the currants and gooseberries the five sepals of the flower are the showy portion.

Sinus - An open space.

Smooth - Here usually refers to the absence of hairs or glands.

Stalked gland - A gland borne on a hair-like stalk.

Stamen - The stamen is composed of the filament and the anther.

Style - The stalk-like portion in the center of the flower. In the currants and gooseberries it may be divided into two branches.

Whorl - A complete circle of leaves or leaf-like structures.

RUSTS OCCURRING ON RIBES IN THE WEST.

By Ellsworth Bethel, Pathologist,
Office of Forest Pathology.

Ribes are attacked not only by white pine blister rust but by seven other rusts, which may be found in the West. It is desirable that persons interested in blister rust be able to distinguish these various rusts on Ribes.

Rusts are themselves plants, which grow as parasites on other plants. They grow within the tissues of the host plant, and at certain seasons send out to the surface of the leaf, stem, or fruit very small reproductive bodies known as spores. These spores occur in definite pustules known as sori (singular sorus). The sorus has a thin, membranous covering known as the peridium which later ruptures to free the spores. The color of a rust sorus is determined either by the color of the peridium or of the spores, and may be white, black, orange, red, or yellow. The sori often scarcely project beyond the surface of the leaf or stem, but in other cases appear as long cluster cups, or as telial horns as in white pine blister rust.

The sori, depending upon the type of spores produced, are termed pycnia (O), aecia (I), uredinia (II), and telia (III). There are also certain types of aecia recognized, as follows: an aecium whose peridium disappears early, leaving a naked pustule of spores is called a Caeoma (example, the aecial stage of *Melampsora confluens*). If the aecium is cup-shaped and the peridium toothed after breaking it is called an Aecidium. The name Peridermium is applied to certain rusts on conifers and closely related plants whose peridia split or break irregularly. Peridermiums may occur on either the leaves or stems and branches. In the first case they are termed

foliicolous, meaning leaf-inhabiting, and in the second caulicolous, or stem-inhabiting. Peridermiums occurring in the branches and trunks often give rise to large hypertrophies, or galls, or "Witches' Brooms". Foliicolous Peridermiums produce Coleosporium, while caulicolous species give rise to Cronartium.

Six of the rusts of Ribes are heteroecious, that is, they attack two hosts, with pycnia and aecia on one host and uredinia and telia on the other. The other two rusts are autoecious, that is, they occur on only one host, having telia only.

Aeciospores of these various rusts generally appear from the middle of April to the middle of June, though the time varies with the rust, the altitude, season, and climate. For example, the aecia of Melampsora confluens may not be evident east of the Cascades for a month or two after they have disappeared from the cooler, more humid coast region. The uredinia and telia of Coleosporium and Cronartium are not likely to be found in abundance before August or September or later.

The following is a key to the rusts on Ribes which are found in the Rocky Mountains and westward.

*Heteroecious rusts with all spore forms.

- I. Pycnia and aecia on leaves of Ribes.
 - A. Aecia borne in cluster cups which are covered by the peridium until maturity.
 1. Aecia short, broad, densely aggregated, yellowish to pale red.....
.....1. Puccinia Grossulariae.
 2. Aecia long, slender, orange-red.....
.....2. Puccinia micrantha.
 - B. Aecia not borne in definite cluster cups, peridium disappearing early, forming naked pustules of the caeoma type.....
.....3. Melampsora confluens.

II. Uredinia and telia on leaves of Ribes.

- A. Peridium of the uredinial or telial pustule vanishing early. Uredinia appearing as large flat naked pustules, developing singly or in concentric rings, and becoming red and waxy in the telial stage.....
.....4. Coleosporium ribicola.

- B. Peridium of the uredinial pustule persistent, the spores liberated through a small opening.

1. Uredinia in irregular groups of small pustules; telia appearing later as hair-like horns, giving a fuzzy aspect to the under side of the leaf.
.....5. Cronartium ribicola.

The white pine blister rust.

2. Uredinia and telia as in Cronartium ribicola and scarcely distinguishable from it. However, in regions remote from the aecial hosts - piñon pines - will probably be found on Ribes aureum only, and not usually evident until after the first of September.
.....6. Cronartium occidentale.

The piñon blister rust.

** Autoecious rusts having only telia.

I. Telia on leaves of Ribes.

- A. Telia black, mostly hypophyllous, occurring only on Ribes lacustre.....
.....7. Puccinia Parkeræ.

- B. Telia, mostly epiphyllous, purplish or deep brown to black, occurring only on Ribes triste.....8. Puccinia Ribis.

Note: It is extremely difficult to distinguish *Cronartium ribicola* from *Cronartium occidentale*, in the uredinal or telial stage. Any *Cronartium* which is found on *Ribes* should be potentially regarded as white pine blister rust until proved otherwise. Any blister rust scout finding such a rust should immediately report it to the man in charge of his work. Specimens of all rusts on *Ribes* should be sent to the Office of Blister Rust Control, 429 Lyon Building, Seattle, Washington.

Life Cycles of the Rusts on *Ribes*.

1. *Puccinia Grossulariae*.
O and I on leaves of *Ribes*.
II and III on sedge (*Carex*).
2. *Puccinia micrantha*.
O and I on leaves of *Ribes*.
II and III on rice-grass (*Oryzopsis*).
3. *Melampsora confluens*.
O and I on leaves of *Ribes*.
II and III on leaves of willow (*Salix*).
4. *Coleosporium ribicola*.
O and I on needles of nut pines or pinyons.
II and III on leaves of *Ribes*.
5. *Cronartium ribicola*.
O and I on stems and branches of white (5-needled pines).
II and III on leaves of *Ribes*.
6. *Cronartium occidentale*.
O and I on stems and branches of pinyon or nut pines.
II and III on leaves of *Ribes*.

7. *Puccinia Parkeræ*.
III on leaves of *Ribes lacustre*.
8. *Puccinia Ribis*.
III on leaves of *Ribes triste*.

